

Remarks

Claims 1 through 4, 6 through 14, 16 through 24, 26 through 34, and 36 through 41 remain pending in the application. Claims 5, 15, 25 and 35 are canceled.

Claims 1, 11, 21, 31 and 41 are amended to require injection of an anti-restenosis agent at a site distal to the stent, site of angioplasty, or diseased segment of the coronary blood vessel, incorporating the limitations of claims 5, 15, 25, 35 into their base claims. Claim 41 is similarly amended. The Office Action rejected claims 5, 15, 25, 35 as obvious over Nash, Systems And Methods For Delivering Agents Into Targeted Tissue Of A Living Being, U.S. Patent 6,709,427 (March 23, 2004) (filed Aug. 5, 1999) in view of Stegmann, Induction Of Neoangiogenesis In Ischemic Myocardium, U.S. Pub. 2002/0122792 (filed July 22, 1999), under the assertion that Nash discloses stenting in conjunction with injection of agents into the myocardium from an endocardial region, and that it would have been obvious to inject the agent from anywhere in the endocardium depending on the regions that needs to be treated, and that it would be obvious, if Nash were used to treat stenosis, to inject the agent proximate the coronary blood vessel.

Amended claims 1, 11, 21, 31 and 41 require injection of an anti-restenosis agent at a site distal to the stent, site of angioplasty, or diseased segment of the coronary blood vessel. The Examiner's assumption that injection anywhere in the endocardium is not supported in the art. Neither the pathway nor the agents usefully employed through the pathway are obvious

in view of the cited references. Altman, et al., Exploring Heart Lymphatics in Local Drug Delivery, 1 Lymphatic Research And Biology 47, (2003) (submitted March 26, 2009) illustrates the advantage of the claimed method, which could not have been understood by review of the cited art. The article illustrates the behavior of compositions described in the earlier filed specification of the current patent application. As described in this peer-reviewed article, microspheres injected in the myocardium tend to migrate through the lymphatic system of the heart upstream relative the coronary artery and collect in peri-adventitial heart tissue around the coronary artery. They do not quickly dissipate away from the site. Thus, the Applicant has discovered a drug delivery pathway that was unappreciated in the art, and has beneficial attributes unappreciated in the art. Nothing in the cited references suggests otherwise, and the possibility that injection of agents downstream in the blood flow could affect a lesion upstream relative to the site of injection is counterintuitive. Accordingly, the claims directed to combining use of those pathways with stent placement would not have been obvious.

Conclusion

This response has addressed all of the Examiner's grounds for rejection. The rejections based on prior art have been traversed. Reconsideration of the rejections and allowance of the claims is requested.

Date: July 2, 2010

By: /K. David Crockett/
K. David Crockett, Esq.
Reg. No. 34311